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PATENT

Attorney Reference Number 6541-61172-01  
Application Number 10/085,491

### REMARKS

Reconsideration of the application is respectfully requested in view of the foregoing amendments and following remarks. Claims 1-40 are pending in the application. No claims have been allowed. Claims 1, 21, 22, 28, 32, 33, 34, 35, 38, and 40 are independent.

Not all amendments herein necessarily narrow the claims' scope.

### *Examiner Interview*

Applicant thanks the Examiner for his time during a telephonic interview on July 14, 2005. Claim 1 and Patel were discussed.

### *Cited Art*

U.S. Patent No. 6,393,289 to Bunting et al. ("Bunting").

U.S. Patent No. 5,884,179 to Patel ("Patel").

U.S. Patent No. 5,881,145 to Giuhat et al. ("Giuhat").

U.S. Patent No. 5,550,911 to Bhagat et al. ("Bhagat").

U.S. Patent No. 6,052,589 to Persson et al. ("Persson").

U.S. Patent No. 6,601,031 to O'Brien ("O'Brien").

### *Patent Number of Patel*

The Form PTO-892 with the Action lists an incorrect patent number (5,881,179) for Patel. The patent number should be 5,884,179. To facilitate entry of Patel into the record, Applicants include Patel on the Information Disclosure Statement filed herewith for consideration by the Examiner. Also included is the Dikmen patent, which was included in an earlier IDS of October 22, 2004, that apparently has not yet been considered.

### *Amendment to Specification*

Applicant has amended the specification to correct a typographical error at page 15, line 12. Because the error is apparent from the surrounding text, no new matter is added thereby.

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***Patentability of Claims 1, 5, 14, 17, 19-23, 25, 28, 32, 33, 35, 37, and 40 over***

***Bunting and Patel under § 103***

The Action rejects claims 1, 5, 14, 17, 19-23, 25, 28, 32, 33, 35, 37, and 40 under 35 U.S.C. § 103(a) as unpatentable over Bunting in view of Patel. Applicant respectfully submits the claims in their amended form are allowable over the cited art. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. (MPEP § 2142.)

***Claim 1***

Claim 1 as amended recites in part (emphasis added):

detecting an attempt to establish a second call leg *directed back to the first switch* and forming a hairpin loop in conjunction with the first leg, wherein the detecting is based at least on the stored correlation information . . . releasing at least the first call leg.

For example, FIG. 6 of the Application shows such a hairpin loop, where the second call leg (e.g., leg 636) is directed back to switch A 424. Further support is found in original claim 38, which recites “directed from the second switch back to the first switch.” An example of detecting and releasing is described in accompanying text at page 7, line 13 of the Application:

However, the call legs 534 and 636 can be correlated via correlation information. Based on the correlation indicating detection of the potential hairpin loop scenario, the hairpin loop scenario can be avoided as shown in FIG. 7 by removing the call legs 534 and 636).

Claim 1 stands rejected over Bunting in view of Patel. According to the Action, Bunting does not teach or suggest detecting an attempt to establish a second call leg . . . forming a hairpin loop . . . , wherein the detecting is based at least on the stored correlation information. (page 3, paragraph 3 of the Office Action dated March 25, 2005). Instead, the Action relies on Patel as teaching the language. Applicant thus addresses whether Patel contains sufficient disclosure that would result in the claimed arrangement if combined with Bunting.

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*Patel's description of "tromboning" and FIG. 2 does not teach or suggest "detecting an attempt to establish a second call leg directed back to the first switch and forming a hairpin loop in conjunction with the first leg" as recited in claim 1.* Patel does describe a phenomenon called "tromboning." For example, at column 2, lines 60 et seq., Patel describes (emphasis added):

Upon receiving the roaming number back from the serving MSC, the HLR compares the received data identifying the telecommunications node with the received roaming number identifying the serving MSC and determines whether it would be more optimal for the telecommunications node to directly establish a call connection to the serving MSC. In response to an affirmative determination, the HLR transmits a third signal to the telecommunications node instructing the telecommunications node to disconnect the existing call connection established as a result of the first all setup signal and to re-originate a new call setup signal directly towards the serving MSC by using the included roaming number as a called party address. A call connection without the unnecessary *tromboning* trunk connection is then established between the calling party and the called party mobile station.

However, Applicant points out that in the scenario described, the so-called tromboning would involve a situation as shown in FIG. 2. In fact, Patel describes at column 4, lines 32 et seq.:

Due to such HLR interrogation and rerouting of an incoming call by a serving GMSC, inefficient and wasteful call connections are often times established towards a roaming mobile station. Reference is no made to FIG. 2 illustrating the "tromboning" of trunk connections within a telecommunications network to establish a call connection between a calling party terminal 10a and a roaming called party mobile station 10b.

In FIG. 2, the described "trombone" runs from 70a to 30, to 70b. Thus, the trombone is not "directed back" to 70a.

Applicant makes no claim to *receiving information back* per se. For example, although information is sometimes received back in Patel, a call leg is not directed back to a switch in an attempt to establish a hairpin loop.

For at least these reasons, Patel's trombone is of a different topology than the claimed hairpin loop arrangement, and even if combined with Bunting, Patel would not result in the recited "directed back" language.

*Further, Patel's subsequent description of optimized routing does not teach or suggest "detecting an attempt to establish a second call leg directed back to the first switch and forming a hairpin loop in conjunction with the first leg" as recited in amended claim 1.* Claim 1 recites "detecting an attempt to establish a second call leg directed back to the first switch." For example, in FIG. 6 of the Application, leg 636 is directed back to the first switch.

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Column 5, line 19- column 6, line 32 of Patel refer to FIG. 3 of Patel and describe "optimized routing" as follows:

Reference is now made to both FIGS. 3 and 4 illustrating the optimized routing of a call connection from a first MSC 70a serving the calling party mobile station 10a towards a second MSC 70b serving the called party mobile station 10b. . . . The trunk call connection 20 through the connected PSTN 150 is accordingly established between the first MSC 70a and the GMSC 30. . . . By evaluating the identities of both MSCs, the application module 210 is able to determine whether it would be more efficient to establish a call connection directly between the first MSC70a and the second MSC 70b than to establish a call connection between the first MSC 70a and the second MSC 70b via the GMSC 30.

Thus, Patel does describe a connection from MSC 70a and GMSC 30. However, Patel does not go on to describe that a detection of a hairpin loop wherein the second call leg is "directed back to the first switch." For example, even if GMSC 30 could be construed as the "first switch," Patel does not describe attempting to establish a second call leg directed back to GMSC 30, let alone detecting such an attempt.

Finally, Patel goes on to describe at column 6, lines 32:

Furthermore, in case both mobile stations are being served by the same MSC, no trunk connection is needed. After receiving the roaming number from the HLR, the first MSC determines that the roaming number represents itself and switches internally to establish a speech connection with the called party mobile station currently roaming within its coverage area.

Similarly, this Patel passage also fails to describe attempting to establish a second call leg, let alone detecting such an attempt.

*Patel's description of subscriber data in conjunction with FIG. 1 does not teach or suggest detecting an attempt to establish a hairpin loop "based at least on the stored correlation information."* To further clarify, Applicant has amended the claim to make clear that the correlation information is "for the first call leg related to the service request directed to the second switch by the first switch." As understood by Applicant, Patel does not have sufficient teaching or suggestion that would result in such an arrangement, even if combined with Bunting.

*A Bunting-Patel combination thus fails to teach or suggest the recited arrangement.*

Motivations to combine or modify references must come from the references themselves or be within the body of knowledge in the art. (See MPEP § 2143.01.) As understood by Applicant,

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Bunting and Patel both lack sufficient motivation or suggestion for modification of the described systems to result in the claimed arrangement.

For at least these reasons, Applicant believes that claim 1 and its dependent claims, 2-20, are allowable over Bunting in view of Patel.

***Claim 21***

Claim 21 recites "detecting an attempt to establish a second leg directed back to the first switch and forming a hairpin loop" and is therefore also allowable over Bunting and Patel.

***Claim 22***

Claim 22 recites "at a switch . . . initiating an outgoing call leg . . . at the switch, receiving an incoming call leg" and "responsive to correlating . . . processing . . . as a hairpin loop" and is therefore also allowable with its dependent claims, 23-27, over Bunting and Patel.

***Claim 28***

Claim 28 now recites "detecting a request to establish a second leg directed back to the first switch and forming a hairpin loop in conjunction with the first leg" and is therefore also allowable with its dependent claims, 29-31, over Bunting and Patel.

***Claim 32***

Claim 32 now recites "detecting a request to establish a second leg directed back to the first switch and forming a hairpin loop in conjunction with the first leg" and is therefore also allowable over Bunting and Patel.

***Claim 33***

Claim 33 now recites "routing the call as an outgoing call leg from the redirecting switch to the service platform switch" and "receiving at the redirecting switch an incoming call leg." Further, claim 33 recites "correlating the outgoing call leg and the incoming call leg." The claim is therefore allowable over Bunting and Patel.

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### ***Claim 35***

Claim 35 recites "a match between call set up signaling information from the call leg directed from the switch and call set up signaling information directed to the switch" and is therefore allowable over Bunting and Patel. Dependent claims 36-37 are therefore also allowable.

### ***Claim 40***

Claim 40 recites "accommodates a hairpin loop with at least one service platform switch that need not be upgraded to avoid the hairpin loop scenario" and is therefore allowable over Bunting and Patel.

### ***Claim 34***

Claim 34 recites "a first outgoing call leg . . . to a service platform" and "a second incoming call leg from the service platform." Further, claim 34 recites "employing the correlation key to correlate the first outgoing call leg with the second incoming call leg." The claim is therefore allowable over Patel and the Background.

Applicant respectfully disagrees that Applicant Admitted Prior Art includes any mention of "employing the correlation key to correlate" as described in the Action at Page 10.

### ***Claim 38***

Claim 38 recites "means for storing call set up signaling information for a call leg directed from the first switch to the second switch as correlation information" and "detect a match between the correlation information and the call set up signaling information for the call leg directed from the second switch back to the first switch." The claim stands rejected over Giuhat in view of Bunting. As understood by Applicant, Giuhat fails to add sufficient teaching or suggestion to Bunting that would result in the claimed arrangement.

The claim is therefore allowable over Giuhat and Bunting along with its dependent claim, 39.

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### *Additional References and Rejections*

Applicant recognizes that the Action also cites Giuhat, Bhagat, Persson, and O'Brien in various rejections of the dependent claims. As understood by Applicant, the passages cited in these references fail to provide additional teaching or suggestion that would lead to the recited combinations of the independent claims. The claims and their dependent claims are therefore allowable over the reference combinations listed in the Action.

### *Request for Interview*

If any issues remain, the Examiner is formally requested to contact the undersigned attorney prior to issuance of the next Office Action in order to arrange a telephonic interview. It is believed that a brief discussion of the merits of the present application may expedite prosecution. Applicant submits the foregoing formal Amendment so that the Examiner may fully evaluate Applicant's position, thereby enabling the interview to be more focused.

This request is being submitted under MPEP § 713.01, which indicates that an interview may be arranged in advance by a written request.

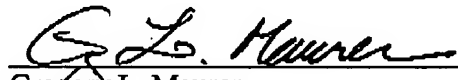
### *Conclusion*

The claims in their present form should now be allowable. Such action is respectfully requested.

Respectfully submitted,

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